

REMARKS**A. Background**

The present amendment is filed in response to the Examiner's Office Action mailed April 4, 2005. Claims 1-10, 22-25, and 32-36 were pending. Claims 11-21 and 26-31 were previously withdrawn from consideration. Claims 1-10 and 32-36 were allowed. Claims 1-10, 22-25, and 32-36 remain pending in view of the following remarks.

Reconsideration is respectfully requested in view of the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

B. Rejections Under 35 U.S.C. § 102

The Office Action rejects claims 22, 23, and 25 under 35 U.S.C. § 102(c) as being anticipated by United States Patent No. 6,191,441 to Aoki, *et al.* ("*Aoki*"). However, *Aoki*—assuming *arguendo* that it and the other cited references herein qualify as prior art—fails to teach or suggest each and every element of the pending claims and thus is not an anticipatory reference.

Aoki generally teaches ferroelectric memory cells that include one transistor and ferroelectric capacitor. In particular, *Aoki* discloses, as seen in Figure 16A, memory cells that each include an electrode 18 and 19 formed on the upper surface of a ferroelectric layer 20. The electrodes are covered with a silicon oxide film 21. Another silicon oxide film 17 is located below the ferroelectric layer. Also included in the memory cell are a gate electrode 4, a source 5, and a drain 6. See *Aoki*, Col. 1, ll. 12-16; Col. 14, ll. 1-11; Fig. 16A.

The claimed invention is substantially different from the device taught by *Aoki*. In particular, independent claim 22, requires, in a ferroelectric memory cell, "a ferroelectric gate

unit comprising a top electrode, a layer of ferroelectric material, and a *bottom* electrode....” *Aoki* discloses no such ferroelectric gate unit. Indeed, though *Aoki* discloses two electrodes 18 and 19 with respect to a ferroelectric layer 20, it explicitly states that “electrodes 18 and 19 are formed on the *upper surface* of a ferroelectric layer 20,” *Aoki*, col. 14, ll. 4-6 (emphasis added). In addition, Figure 17DV, which was also cited by the Office Action, similarly fails to disclose a bottom and top electrode. Rather, this figure explicitly shows electrodes 18 and 19 *atop* ferroelectric layer 20. Consequently, *Aoki* fails to teach or suggest each and every element of independent claim 22 and thus cannot be used to anticipate the present invention. Further, inasmuch as claims 23-25 are dependent on independent claim 22, they are also allowable for at least the reasons given above. Applicant therefore respectfully submits that each of the above claims is patentably distinct and that the Section 102 rejection in view of *Aoki* should be withdrawn.

C. Rejections Under 35 U.S.C. § 103

The Office Action rejects claim 24 under 35 U.S.C. § 103(a) as being unpatentable over *Aoki* in view of United States Patent No. 5,559,773 to McMillan, *et al.* (“*McMillan*”).

Applicant notes that the above rejection is based in part upon the *Aoki* reference. It is further noted that the rejected claim above is dependent on independent claim 22. As was previously discussed, the teachings of *Aoki* are inapplicable to the present invention as applied to independent claim 22 for failing to teach or suggest each of the limitations contained in that claim. Thus, *Aoki* is equally inapplicable to the present claim rejected under Section 103 for at least the same reasons, that is, its failure to teach or suggest all the claim limitations contained not only in independent claim 22, but also the limitations contained in dependent claim 24.

Thus, the Examiner has failed to make out a *prima facie* case of obviousness. Applicant therefore submits that claim 24 is allowable and that the above rejection should be withdrawn.

D. Allowable Subject Matter

Applicant wishes to thank the Examiner for allowance of claims 1-10 and 32-36.

E. Comments on Claim Status Identifiers

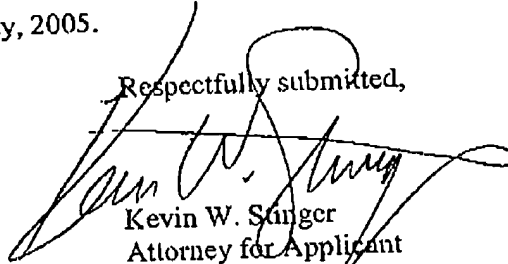
The Office Action objects to the claim identifiers previously designated by Applicant for claims 11-21 and 26-31, which claims were cancelled by Applicant in its Response to Restriction Requirement mailed June 28, 2002. In response, Applicant has modified the claim status identifiers for claims 11-21 and 26-31 to read as "cancelled." Removal of the objection to these claims is therefore respectfully requested.

CONCLUSION

In view of the discussion and amendments submitted herein, Applicant respectfully submits that each of the pending claims 1-10, 22-25, and 32-36 is now in condition for allowance. Therefore, reconsideration of the rejections is requested and allowance of those claims is respectfully solicited. In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that can be clarified in a telephonic interview, the Examiner is respectfully requested to initiate the same with the undersigned attorney.

Dated this 12th day of May, 2005.

Respectfully submitted,



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